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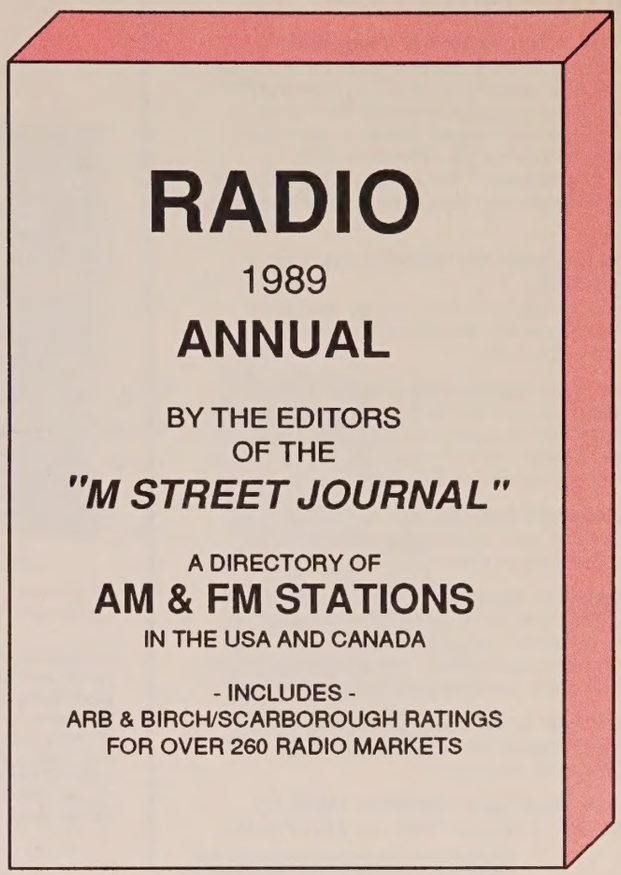

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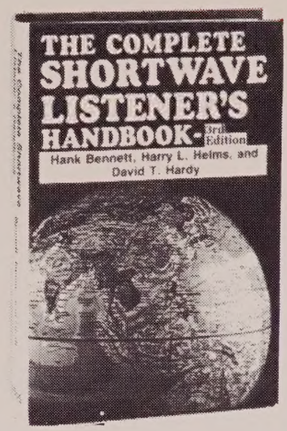

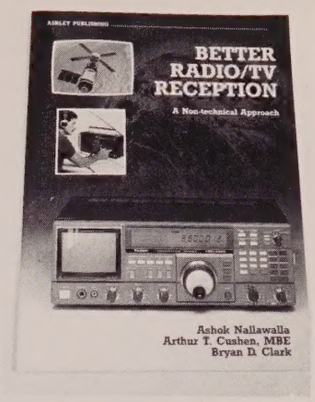

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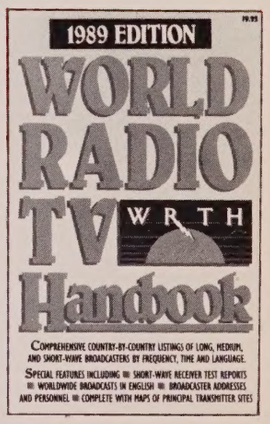

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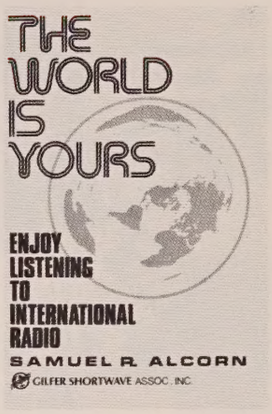

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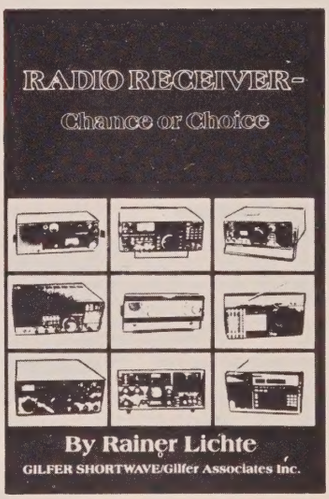

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* Icom IC-R70
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* Eska RX 99PL/M
* Grundig Satellit 400
* Grundig Satellit 650
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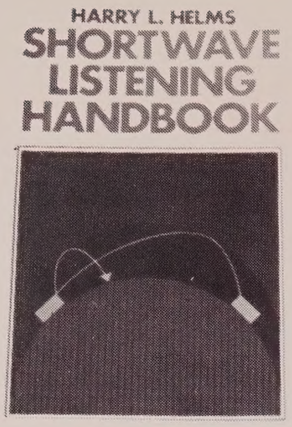

Shortwave Listening Handbook

by Harry Helm

A slick novelette about shortwave listening told in an easy-going style by an experienced writer. Gives the historical perspective you'd expect from hobbiest that started out in the '20s. Some paragraphs may require more than skimming—written as a college text.

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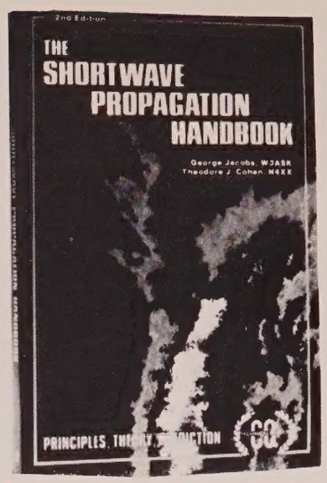

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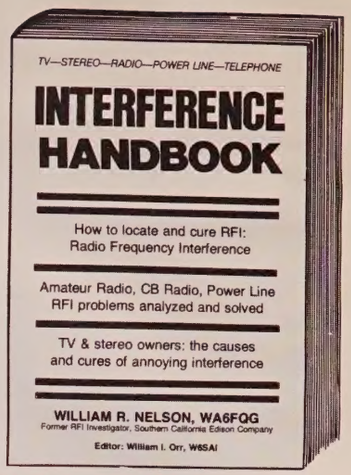
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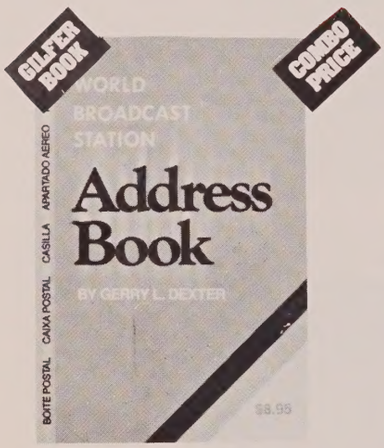

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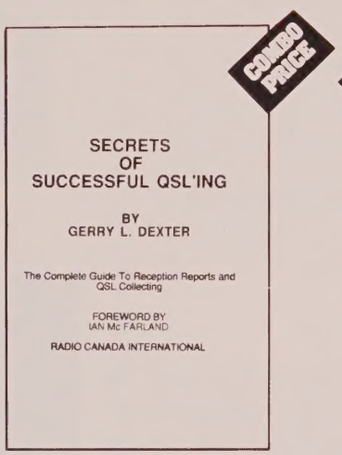
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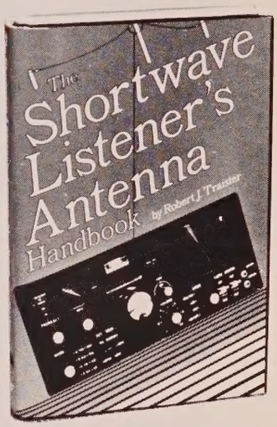

The Shortwave Listener's Antenna Handbook

by Robert J. Traister

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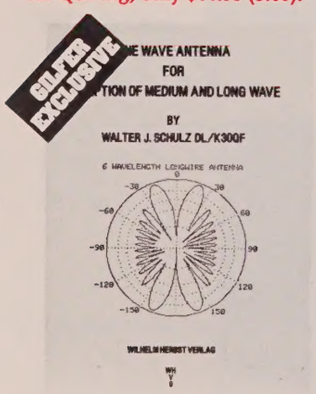

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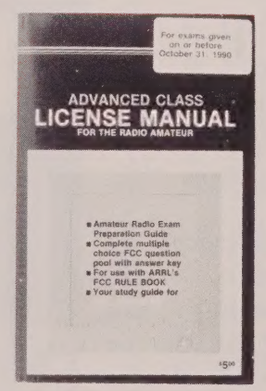
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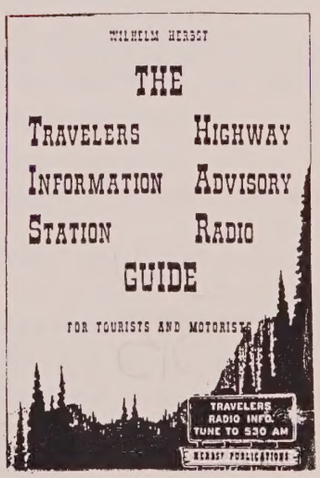

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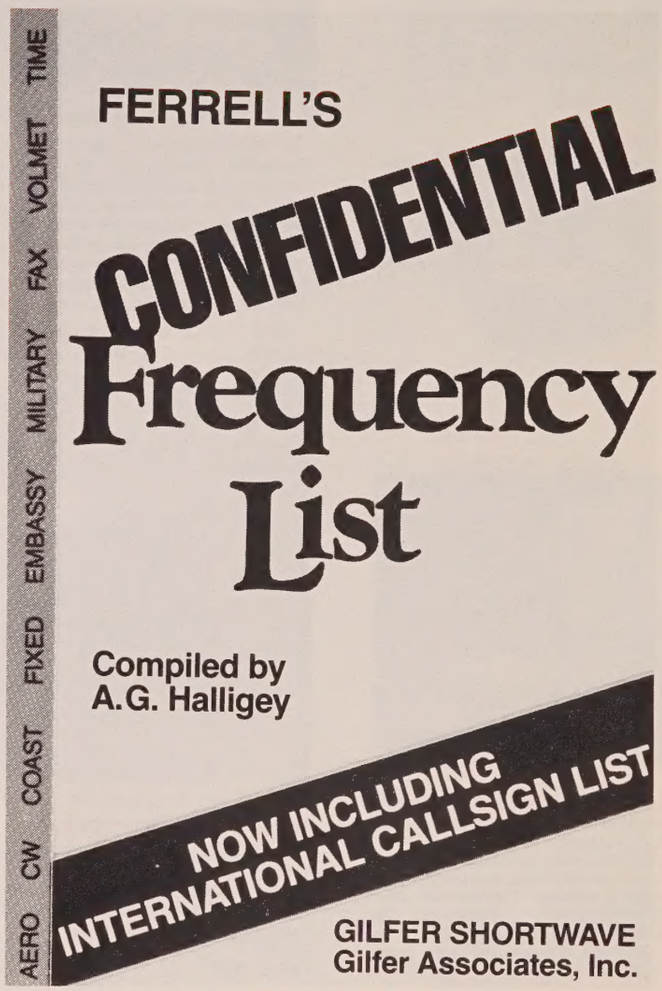

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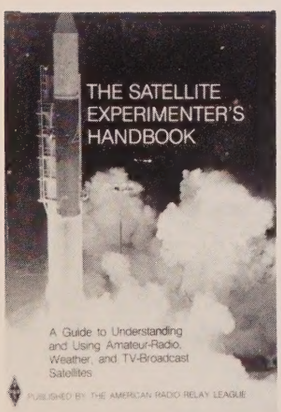
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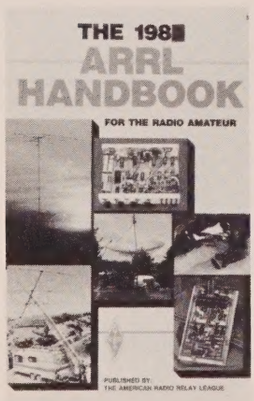

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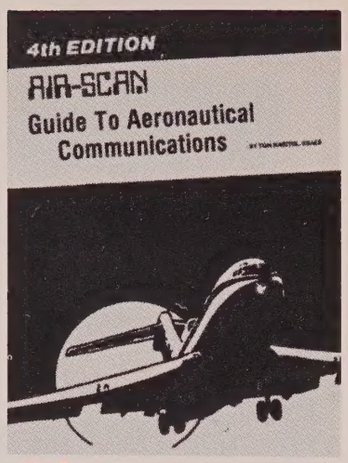

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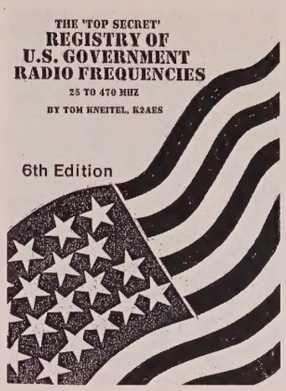

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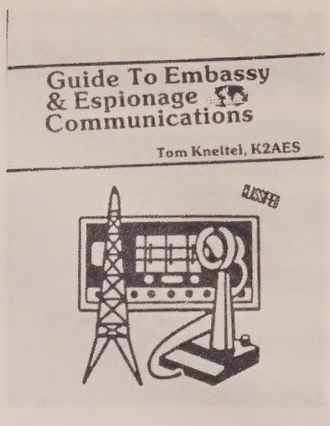

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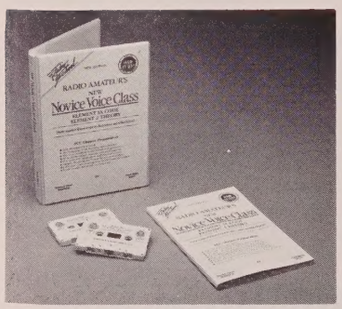

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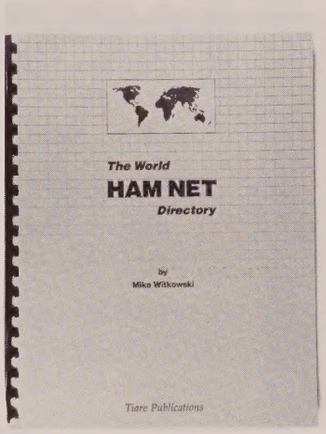

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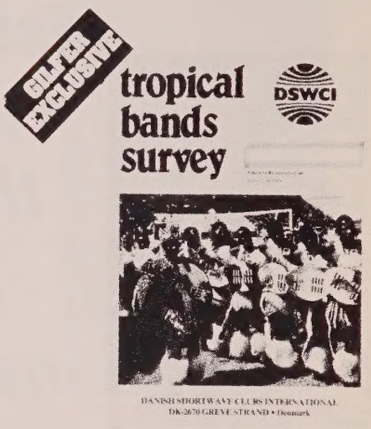

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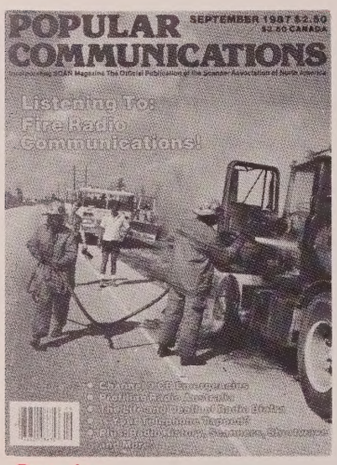

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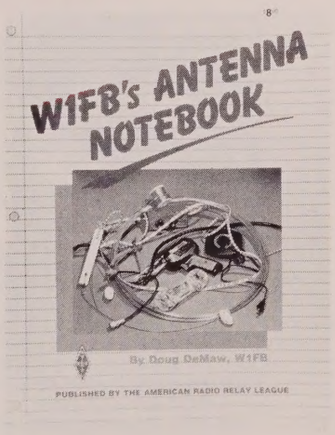

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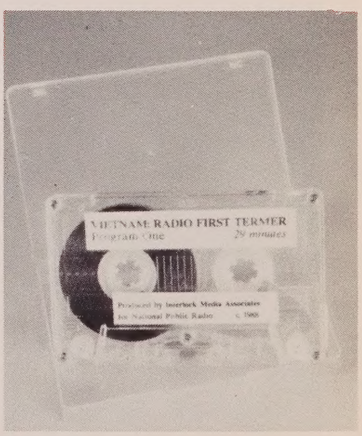
CODE: WIFB **$8.00**

LISTENING IN ON PHONE CALLS

By Tom Kneitel. Contains information on monitoring all types of radio telephone services, including cellular, cordless, ship-to-shore, military aircraft VIP, satellite, microwave relays, and much more.
$12.95



Vietnam Radio First Termer

Cassette tape of influence of radio on Vietnam War. Produced by Interlock Media 1988.
29. min. **$9.95**

JRC-NRD-525

COMMUNICATIONS RECEIVER
HF General Coverage

List: $1365.00

GILFER: $1179.00

*"No. 1 receiver outside the commercial/military bracket ... way ahead of the competition... outstanding results in all modes... a best buy" —**R. Lichte.***

Complete review in More Radio Receiver, Chance Or Choice by R. Lichte.

Options:

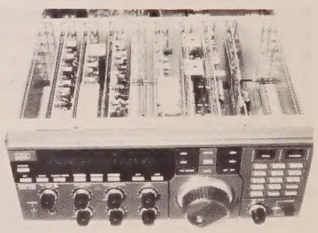
CMK-165 VHF Converter $359
34-60, 114-174, 423-456 MHz
CMH-530 RTTY Demondulator $139
CMH-532 Computer Interface $129
Filters: 300, 500, 1 and 1.8 kHz $129
add up to 2 optional filters

Printer Cable $60
RS-232 Cable $52.50

Black Beauty Dustcover
Handsome, waterproof **12.95**

NVA-88 Speaker
$49.00 (+$4)

ST-3
$69.00 (+$2)



Modular Construction

Tame your world with the successor to the famous professional grade 515. This new model incorporates much of its predecessor and adds many new features of its own to offer truly quality performance to the SWLer.

- Microprocessor controlled tuning, mode select, triple scanning, memory and clock functions
- **Tunes .09 through 34 MHz**
- **Vacuum fluorescent display of frequency & signal meter**
- Computer interface for easy use
- Keyboard frequency entry
- 200 internal memories
- Noise blanker
- Squelch
- Passband tuning
- Incremental tuning
- Attentuator
- Tone control
- Programmable clock/timer

SPECIFICATIONS:

Receiving frequency range 0.09 – 34MHz
34 – 60MHz (*1)
114 – 174MHz (*1)
423 – 456MHz (*1)

Receiving mode RTTY, CW, SSB(USB/LSB)
AM, FM, FAX

Channel memory 200 channels

Receiving system Double superheterodyne
1st IF 70.45399 – 70.453MHz
2nd IF 455kHz

Sensitivity

MODE / FREQUENCY	RTTY, FAX CW, SSB	AM	FM
0.09 – 1.6MHz	5.0μV	15μV	
1.6 – 34MHz	0.5μV	2μV	0.7μV
34 – 60MHz	1.0μV	3μV	1.5μV (*1.)
114 – 174MHz	1.0μV	3μV	1.5μV (*1.)
425 – 445MHz	1.0μV	3μV	1.5μV (*1.)

S/N = 10dB, AF output = 100mW, bandwidth = INTER
modulation = 400Hz, 30% (in AM)
NQL = 20dB (in FM)
antenna impedance = 50Ω

Selectivity

Attenuation / Bandwidth	6dB	60dB
AUX	12kHz or more	— (*2.)
WIDE	4 kHz or more	10kHz or less
INTER	2 kHz or more	6 kHz or less
NARR	1 kHz or more	3 kHz or less (*3.)
FM	12kHz or more	—

Image frequency rejection 70dB or more
Intermediate frequency rejection 70dB or more
Frequency stability ±3 PPM
Dynamic range 100dB or more (500Hz in IF band)
PBS variation range ±1kHz or more
Notch attenuation –30dB or more
BFO variation range 455kHz ± 2kHz or more
RIT variation range ±5kHz or more
Nominal antenna impedance 0.09 – 34MHz
50Ω (Lo-Z terminal)
600Ω (Hi-Z terminal)
34 – 60MHz
50Ω (VHF terminal)(*1)
114 – 174MHz
50Ω (VHF terminal)(*1)
423 – 456MHz
50Ω (UHF terminal)(*1)

AF output Speaker: 0.5W or more (at 4Ω load and 10% distortion)
Line/Recording: 1mW or more (at 600Ω load and 10% distortion)
Antenna input attenuation Approx. 20dB for HF
Approx. 10dB for VHF/UHF (*1)
AGC characteristic Output variation is 10dB or less for antenna input variation of 3μV to 100mV.
Power supply 100/120/220/240VAC ±10%, max. 35VA
12 – 16VDC (13.8V, standard), max. 25W
Auxiliary circuits Noise blanker, S-meter, side-tone input, mute input, transmission monitor, squelch, dimmer, tone control, clock, timer, IF notch filter, pass band shift
Dimensions 330(W) × 130(H) × 280(D) (excluding projected parts)
Weight Approx. 8.5 kg

NOTES:
**1: With option mounted.*
**2: With an optional IF filter (e.g. CFL-231) mounted, the band width for 6dB is 0.3kHz.*
**3: With the CFL-233 optional IF filter.*

ORDER

1-800-GILFER-1

KENWOOD R-5000

COMMUNICATIONS RECEIVER

List: $949.00

GILFER: $829.95

Dual superhet/100 memories/analog-digital display/noise blanker/attenuator/ dual timer/100-29999 kHz/options: SP-43 speaker, VC-20 VHF converter, DC cable.

- Covers 100 kHz to 30 MHz in 30 Bands, Optional 108 to 174 MHz coverage (VC-20)
- Superior Dynamic Range Receiver Circuit. The RF circuits specifically designed to provide superior dynamic range. Substantially improved noise floor level of 102dB, 138 dBm
- Outstanding Sensitivity Specifications
- High Stability Frequency Control
- All-Mode Operation
- 10Hz Step Dual Digital VFOs
- Dual High and Low Impedance
- Antenna Terminals (high/low)
- Superb Interference Reduction
  (1) Dual IF Crystal Filter Improves SSB Operation
  (2) IF Shift Circuit
  (3) Built-in Tuneable NOTCH filter
- Selectable IF Filters
- Dual-Mode Noise Blanker
- Keyboard Frequency Selection, 100 Memories Store Frequency, Band, Mode and Antenna Terminal
- Memory Scroll
- Memory Scan and Programmable Band Scan
  (1) Memory Scan Plus Programmable Memory Channel Lock-Out
  (2) Programmable Band Scan Plus Center Stop Function
- Dual 24-hour Quartz Clocks, with timer
- Optional VS-1 "Voice Synthesizer Unit"
- Optional Personal Computer Control (IF232C/IC-10) The interface unit is compatible with computers with an accessible RS-232C port.
- Rechargeable Memory Back-Up Battery
- Built-In AC Power Supply and Optional 12 VDC Operation Switchable AGC Switch (Fast/Slow)
- RF Attenuator
- "F. LOCK" Switch

*"Excellent... very good audio... best receiver ever offered by Kenwood" —**R. Lichte.***

Complete review in More Radio Receiver, Chance Or Choice by R. Lichte.

SP-430 External Speaker
$61.95 (+$5)

VC-20 VHF Converter Unit
$184.95 (+$2)

Filters	$84.95
DC Cable	$12.95
EX309	$41.50
IF232 Comp. Int.	$89.95
Service Manual	$25.00

Dust Covers
$8.95 (+$2)

YAESU FRG-8800

List: $699.00

GILFER: $639.95

- All mode reception of AM, SSB, CW, FM
- 8 bit cpu control of tuning, mode selection, scanning, memory and clock
- Three scanning modes: all, selected memories, nor frequencies between
- Large LCD display with 100 Hz resolution
- S/SINPO bar graph type indicator
- CAT system allows use of your personal computer for added unlimited memories, auto tuning, and customized scanning
- Direct keypad digital frequency entry, 150 kHz to 29.999 MHz
- 12 memories
- Wide/narrow bandwidths
- Selectable AGC - Noice Blanker with selectable widths - Two 24-hour clocks with timer for switching receiver and recorder at preprogrammed time and frequency - Squelch - Incremental tuning - Attenuator - Tone control

• **Sensitivity:** (1.6-29.999 MHz) SSB/CW 0.4 uV, FM1 uV, AM 4 uV. 150 kHz-1.6MHz) SSB/CW 3 uV, AM 30 uV. (118-173.999MHz)SSB/CW 1 uV, FM 2 uV, AM 10 uV. **Selectivity:** (—6dB) AM 6 kHz and 2.7 kHz, SSB/CW 2.7 kHz, FM 12.5 kHz. **Power:** 100/120/220/240vAC, 50/60Hz 4.5 vDC memory backup.

Options:

FRV-8800 VHF Converter	$119
FIF-232C Computer Interface	$84.95

YAESU FRA-7700 ACTIVE ANTENNA

Small size makes for portability and inconspicuous placement indoors. Four foot whip mounted to preamplifier base. Designed for Yaesu FRG-7700 and FRG-8800 receivers. Plugs into accessory socket.

$59.95 (+$3)

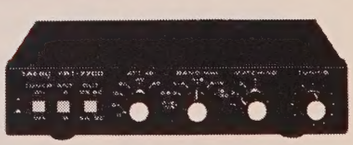
YAESU YH-77
$24.95 (+$2)

Lightweight headphones that rest on the ears, comfortably, for hours of DXing fun. Cord length 4; 8 ohm.

YAESU YH-55
$24.95 (+$2)

FRT-7700 Antenna Tuner
$65.00 (+$3)

covers the range of 150 kHz to 30 MHz in 6 bands. This antenna matching unit allows optimun performance to be obtained with outdoor antennas. ON/OFF switch, step-attenuator up to 60 dB and 2-antenna selection switch included.



SONY
ICF-2010

Complete review: **Radio Receiver, Chance or Choice**, R. Lichte.

Looking for a compatible antenna? See indoor and outdoor suggestions (from our customers) shown below.

- Dual PLL quartz frequency synthesis tuning
- Quartz frequency tuning assures you of optimum stability and reduces drift to an absolute minimum
- Built-in microprocessor quartz clock
- Clock has standby and alarm capability
- Programmable timer offers convenience of turning receiver on and off automatically
- Switchable 12 hour/24 hour clock indication - 24 hour indication facilitates reference to Greenwich Mean Time
- 65 minute Sleep Timer with 15, 30, or 60 minute settings
- Synchronous detection circuitry dramatically reduces fading and annoying "beat" frequency interference from adjacent stations
- Switchable IF bandwidth with "narrow" mode to select one station out of a crowded band, or "wide" for the lowest distortion
- 32 station memory presets give you immediate recall at the push of a button and avoids retuning of hard-to-find stations
- Memory scan
- Automatic scan
- Manual tuning
- Band selector function for quick access to SW bands

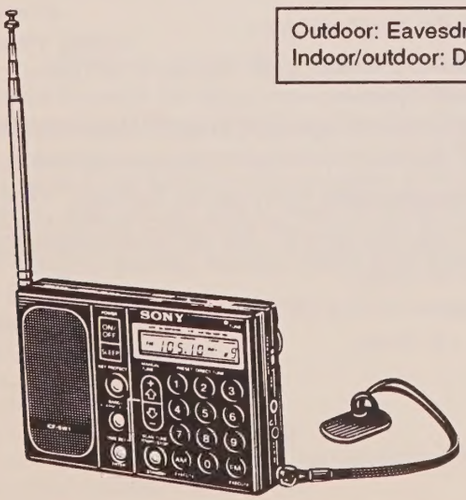
Frequency Range: AM: 150-29, 999.9 kHz; FM: 76-108 MHz; Air: 116-136 MHz
Antenna System: LW, MW: Built-in Ferrite Bar Antenna; FM, Air, SW Telescopic Antenna
Inputs: DC-In 4.5V, External antenna input (minijack x 2)
Outputs: Earphone (minijack); Record output (minijack)
Speaker: 4-inch dynamic
Power Requirements: Batteries "D" x 3(4.5V) (optional); "AA" x 2 (3V) (optional) for programmable clock/timer; AC 120 Volts, 60 Hz with AC-120W AC Adaptor (supplied); DC-12 Volts with DCC-127A Car Battery Cord (optional)
Dimensions: 6 1/4" H x 11 3/8" W x 2 1/16" D
Weight: 3 lbs, 12 oz (with batteries inserted)

ICF-2010
"THE FALCON"

List: $399.00
GILFER: $349.75 (+$4)

FALCON NEST Case II useful as storage or for traveling. Made of black Dupont Cordura. Three inch wide shoulder strap with slip-proof facing. Size 12" x 8" x 4". Also holds the ATS-803, Uniden 2021, etc. Zipper closing. An extra rear pocket. Made in USA by TENBA - so well, there's a five year warranty.
CODE: CASE II **$32.95 (+$2.50)**

FALCON HOOD A black tight-woven waterproof material (used in raincoats!) can protect your pet when not in use. Slashed to accommodate the antenna extended, the Falcon Hood keeps off sand or dust and coffee just rolls away.
CODE: HOOD **$12.95 (+$2)**



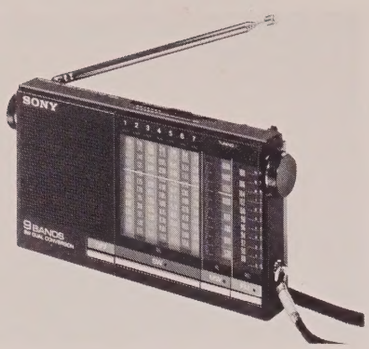
Outdoor: Eavesdropper II (trap-dipole)
Indoor/outdoor: Datong AD-270, AD-370, Dressler ara-30

ICF-SW1S
SONY WORLD BAND RADIO® KIT

- AM (LW, MW, SW) and FM reception
- Ultra-compact World Band Radio is no bigger than a cassette case
- Kit comes with multi-voltage adapter for use in countries worldwide
- Kit has an active antenna with precision antenna controller
- Quartz frequency synthesis tuning is the world's most accurate, drift-free method

CODE: SW1S **$279.00 (+$4)**

Tune the World



SONY

List: $149.95
GILFER: $99.95
(+$4)

ICF-4920

CONVENIENCE FEATURES

- **9 band coverage, including shortwave (1-7), AM, and FM**
- **Sleek, compact design**
- **Bandspread system** in shortwave for easy station selection and pinpoint tuning
- **LED tuning indicator** aids precise tuning
- **Soft touch band selectors** for effortless selection
- **Tone selector switch** adjusts for music or news
- **Supplied carrying strap**
- **Dual-conversion superhetrodyne circuitry** on SW for high sensitivity and interference rejection
- **FM/SW telescopic antenna**
- **Built-in ferrite bar antenna** for AM

SONY

PRO-80

List: $399.00

GILFER: $349.95 (+$5)

The Essentials

- Unique World Band designed to be hand held for maximum convenience, portability
- 150 kHz—108 MHz continuous full coverage—AM (LW, MW)/Narrow FM/TV 2—6 CH plus Air, PSB, and 7—13 CH with supplied frequency converter covering 108.15-216 MHz
- Direct Access 10 key tuning
- Professional tuning ability
- 40 station memory system with 5 different memory scan capabilities
- Automatic and manual squelch
- Full range of professional features

Fast Direct Access™ Tuning

- Direct Access 10 key microprocessor tuning lets you key-in channels directly
- Direct Access tuning keyboard makes the unit as easy to use as a pocket calculator
- Liquid Crystal Display (LCD) for digital frequency read-out of stations selected

SONY

List: $299.95

GILFER: $249.95 (+$4)

ICF-2003

TECHNOLOGY FEATURES

- **Quartz frequency synthesis tuning:** the most accurate, drift-free method known
- **Microprocessor control** of all clock and tuning functions
- **Dual conversion** AM (LW, MW, SW) circuit for higher sensitivity, lower interference
- **AM sensitivity/switch** adjusts for near or distant stations
- **SSB (Single Side-Band) / CW (Continuous Wave) capability**
- **Record output jack** facilitates off-the-air tape recording
- **Supplied earphone** for personal listening

SPECIFICATIONS

Frequency Range: AM: (LW, MW, SW): 153-29995 kHz; FM: 76-108 MHz

Antenna System: LW, MW: Built-in Ferrite Bar Antenna; SW, FM: Telescopic Antenna.

Sensitivity: 1 μV for 6 dB signal-to-noise ratio at 10 MHz (external antenna input)

Image Ratio: 72 dB at 10 MHz

Selectivity: ±3 kHz at −6 dB; ±6 kHz at −60 dB

Speaker: 3" Dynamic

Inputs: External DC input jack; External Antenna (mini jack)

Outputs: Record out (mini jack); Earphone out (mini jack)

Power Requirements: Radio section batteries: "AA" x 4 (6 Volts) (batteries not included); Computer/clock section batteries: "AA" x 2 (3 Volts) (batteries not included); AC-120 Volts, 60 Hz with AC-9W supplied AC adaptor.

Dimensions: 4⅝" H x 7⅛" W x 1¼" D

Weight: 1 lb, 15 oz.

Panasonic®

RF-B60

$249.95 (+$4)

Microcomputer-Controlled PLL Quartz Synthesized Receiver

The PLL (Phase-Locked Loop) Quartz Synthesized Receiver found in the RF-B60 provides outstanding tuning convenience and superb reception. That's because microcomputer-controlled integrated circuitry synthesizes the exact frequencies required for clear reception of stations. And, a virtually unwavering quartz crystal reference frequency helps to assure dependable performance, so once you've "locked-in" to a station, you stay locked-in for as long as you choose to listen.

Up-Conversion Double Superheterodyne System

The RF-B60 uses an Up-Conversion Double Superheterodyne Receiver System. Two intermediate frequencies help to substantially lessen the first and second image interference characteristics, while image rejection is lessened by raising the initial IF to 55.845 MHz. The result is clear reception with a reduction in beats, whistles, and other extraneous noise.

6-Way Multi-Tuning System

- **36-Station Preset Memory Tuning:**

Lets you easily program up to 36 stations for instant recall.

- **Frequency Direct Access Tuning:**

Use the numeric keypad to tap in the frequency of the desired station for quick, accurate tuning.

- **Meter Band Direct Access Tuning:**

Use this function to call up the lowest frequency of a particular band, then fine-tune using Electronic Rotary Tuning, Up/Down Manual Tuning, or Auto-Scan Tuning.

- **Up/Down Manual Tuning:**

Use this option to manually change station frequencies for those times when you are not certain of a station's exact frequency.

- **Auto-Scan Tuning:**

Lets you automatically "scan" a meter band until you arrive at a station frequency you desire.

- **Electronic Rotary Tuning:**

Turn the Rotary Tuning Dial to change frequencies for precise tuning, or to tune-in stations for which you do not have an exact frequency.

Built-In Quartz Dual Clock/Timer with Sleep/Standby Functions

The clock/timer keeps time in two separate time zones, so you'll always know the time of day that your favorite foreign programs are broadcast in their homelands. And you can drift to sleep knowing the Sleep function will automatically turn off the unit. Or wake up to your favorite daily broadcast letting the Standby function automatically turn on the unit at a preset time.

Additional Features

- LCD Multi-Information Readout
- 10-Key Direct Time Settings
- Operation Hold Switch
- 1kHz Step Fine Tuning for LW/MW/SW
- Operates on 4 "AA" batteries for radio (not included) and 2 "AA" batteries for clock memory (not included)

GRUNDIG®

Satellit 400 International

THE SATELLIT 400 is a sleek, all-electronic portable with full band (SW 1.6-30.0 MHz) FM, AM, LW. User-friendly, 24-station "intermix" station memory with memory scan, large LCD, convenient number keypad, 24-hour clock with 2-time zone preprogrammable switch-on function. Has PLL crystal tuning, double superhet, SSB/BFO capability, local/distant SW station lock-on and built-in sturdy telescoping and ferrite antennas.

Six watt audio peak power (controlled by separate volume) and bass and treble faders for maximum sound clarity. Cabinet: Germini Grey with pop-up stand for tilting at correct angle.

Power supply: AC, adjustable 110-127/220-240v, 50/60 Hz. DC, 12 V external supply. Batteries 6 1.5V. Size: 11.8" x7"x2 3/4". Wt. 4 3/4 lbs.

Code: Sat 400 **$399.95 (+$6)**

Satellit SAT-650

Fabulous sound makes AM, FM, SW and LW like you've never heard before. This portable (18 3/4 lbs!) has ferrite antenna and telescoping (75 ohm). 60-station memory (32 on SW).

Well built; easy to operate; sturdy carry handle. Optional rechargeable battery unit. Large LCD readout - excellent for vision impaired.

AM pre-selector with motor drive; separate bass/treble controls; BFO/SSB unit with switchable LSB/USB.

Size: 19 3/4" x 9 1/2" x 8"

Code: SAT 650 **$995.00 (+$10)**

DATONG

$169.95 (+$3)

Datong Model SRB2 Automatic Woodpecker Blanker

- Adds to any HF receiver or transceiver. Simply connects to antenna and loudspeaker terminals.
- No manual adjustments required. Automatic systems take over all the synchronisation and width adjustments required by conventional add-on blankers.
- Total elimination of Woodpecker pulses thanks to blanking in both antenna line and in audio line. Replaces each Woodpecker pulse with an equivalent period of silence.
- RF blanking stops receiver desensing while simultaneous AF blanking removes any residual clicks and allows use with AM signals also.
- Equally effective when more than one Woodpecker is present at the same time.
- Built-in RF bypass relay with VOX control.

Supply Voltage: 10 to 16 volts DC, reverse polarity protected.
Supply Current: 80 to 350mA depending on audio level.
Audio output power: 2 watts into 8 ohms with 15V supply 1.5 watts into 4 ohms with 10V.
AF gain: Unity.
RF insertion loss: 1 db.
Maximum transmitter: 150 watts continuous.
AF input impedance: 2K (suitable for connection to external loudspeaker outputs).
Pulse repetition rate: 10 or 16Hz, panel switchable.
Dimensions: 5.9 x 3.5 x 1.7 inches.
Weight: 17.7 ounces.
Accessories supplied: Model SRB2 is supplied with two leads for audio input and output connections (RCA phono plug to bare end), and a jack for DC power supply.
Optional accessories: 12 VDC supply

Datong Model ASP Auto RF Speech Processor

Model ASP boosts transmitter talk power yet simply connects in series with microphone lead. It gives similar improvement on any band and with any speech transmission model.

- Gives increased "punch" or "talk power" comparable to times-ten increase in peak sideband power (SSB or AM) or peak deviation (FM).
- Instant push-button selection of 0, 6, 12, 18, 24, or 30dB of true r.f. clipping for optimum talk-power enhancement under all conditions.
- LO/HI microphone impedance matching.
- Internal or external supply only 15mA at 6 and 16V.

Model ASP is supplied with 2 phone plugs, a 3.5 mm jack plug and a microphone plug. When ordering please specify the wiring arrangement required for the microphone socket.

$195.00

AMATEUR RADIO EQUIPMENT

Gilfer is pleased to offer the finest in amateur radio transceivers and accessories. Please call for our competitive prices.

KENWOOD TS-140S

The budget-minded DXer's dream. 100 W RF output on all HF ham bands, with general coverage receiver. Modes: USB, LSB, CW, AM, FM. Programmable band marker keeps you within your band allocations. Features include IF shift, dual noise blankers, RIT, variable AGC, and more. 31 memory channels, digital readout. Many options available.

KENWOOD TS-440S/AT

Features 160-10 meter operation with general coverage receive capability. Automatic antenna tuner installed (also available without auto tuner). All modes: USB, LSB, CW, AM, FM & RTTY. Digital frequency readout and direct frequency entry. 100 memory channels. RF input power; 200 W PEP on SSB, 200 W DC on CW, ASFK, FM, and 110 W DC on AM. Many options available, including IF filters, power supplies, voice synthesizer, RS-232C interface, etc.

ICOM IC-735

High-performance, compact HF transceiver. All HF bands and modes plus 100 kHz to 30 MHz receiver. 12 tunable memories, dual VFOs, RIT, and notch filter. Optional AT-150 automatic antenna tuner available.

YAESU FT-757GX/II

Full-featured HF transceiver. USB, LSB, CA, AM & FM operation on 10-160 meters, and general coverage receiver. QSK operation, built-in iambic keyer, IF notch filter, 10 memory channels. CAT System allows computer control of transceiver. Options include standard heavy-duty power supplies, automatic antenna tuner, microphones, and more.

KANTRONICS KAM

All mode RTTY/Packet/CW/AMTOR/FAX modem. RS-232C or TTL compatible for use with any home computer. Dual-port for packet gateway operation or simultaneous HF and VHF packet connects. Features Personal Mailbox and KA-Node operations. Includes power supply, cables and connectors (user must supply mic jacks and computer RS-232 or TTL connector).

$299.00

(Other Kantronics models also available, call for more info.)

TRANSCEIVERS In stock now.

ICOM R-7000

ICOM's R-7000 is the most advanced VHF/UHF all-mode receiver available to the radio enthusiast. Frequency coverage is an incredible 25 MHz to 2 GHz (with a small gap between 1000 and 1025 MHz -- guaranteed to 1.3 GHz). Microprocessor control allows direct-entry of frequency and mode; 99 memory channels; 6 different scanning modes; RS-232C computer interface port. Other features include a 10.7 MHz IF output; 50-ohm coaxial input (N-type); selectable tuning steps of .1, 1, 5, 10, 12.5 or 25 kHz. Options include RC-12 remote control unit; TV-R7000 video unit for television reception; and EX-310 speech synthesizer.

List: $1199.00

GILFER: $1019.00(+$10)

RC - 12 Remote Control .....$ 66.95 (no charge for
EX - 310 Speech Synthesizer ....$ 49.95 install. & shpg.)
TV - R 7000 TV Unit .....$ 139.95 (+$2.00)
AH 7000 Discone Antenna .....$ 99.95 (+$4.00)
Dust Cover .....$ 8.95 (+$2.00)

Specifications:

Frequency range	-	25 to 1000 MHz plus 1025 to 2000 MHz
Tuning control	-	Digital PLL synthesizer w/CPU control & 100 Hz fluorescent display
Memories	-	99 tunable memory channels
Receiving modes	-	A3 (AM); A3J (USB/LSB); (FM Wide/Narrow)
Sensitivity	-	FM Wide/Narrow (15 kHz/6 kHz): Less than 0.5 u V for 12 dB SINAD AM (15 kHz), less than 1.0 u V for 10 dB SINAD SSB (2.8 kHz), less than 0.5 u V for 10 dB SINAD
Image rejection	-	More than 60 dB
Scan modes	-	Full memory scan; selected memory scan; programmed (hi-lo) sweep mode selected scan; priority scan; auto write programmed sweep
Power	-	DC: 13.8 V (w/optional DC kit) AC: 117 V or 240 V
Weight	-	16.5 lbs/7.5 kg
Dimensions	-	11 1/4 (W) x 4 3/8 (H) x 10 7/8 (D)

SCANNERS,

WHEN YOU'RE READY

FOR THE BEST.

For full review on both scanners, see "MORE RADIO RECEIVER, Chance or Choice" by Rainer Lichte.

YAESU FRG-9600

A sophisticated all mode VHF/UHF scanning receiver, the FRG-9600 features 100 programmable memories and frequency coverage from 60 to 905 MHz. Direct-entry keypad allows easy frequency input, and the main tuning dial allows .1, 1, 5, 12.5 & 25 kHz tuning steps. An optional computer interface offers unlimited possibilities in frequency control. Television reception is available with the optional NTSC Video Unit. Included with the unit: mobile mounting bracket, 12 VDC/117 VAC power supply, and telescoping whip antenna.

Specifications:

Frequency range	-	60 to 905 MHz continous coverage
Tuning control	-	Digital PLL synthesizer, microprocessor control & 100 Hz digital display
Memory channels	-	100 channels (10 x 10 - channel banks)
Receiving modes	-	A3 (AM); A3J (SSB); F3 (FM Wide/Narrow)
Sensitivity	-	FM Wide (180 kHz): 1.0 uV for 12 dB SINAD FM Narrow (15 kHz): 0.5 uV for 12 dB SINAD AM Wide (6 kHz): 1.5 uV for 10 dB S+N/N AM Narrow (2.4 kHz): 1.0 uV for 10 dB S+N/N SSB (2.4 kHz): 1.0 uV for 15 dB S+N/N
Image rejection	-	60 to 460 MHz : - 50 dB typical 460 to 905 MHz : - 40 dB typical
Scan modes	-	scannes up to 10 channels per bank ; sweeps between 2 channels of any selected bank
Power	-	12 to 15 VDC
Weight	-	4.9 lbs/2.2 kg (without options)
Dimensions	-	7 1/8 (W) x 3 5/8 (H) x 8 6/8 (D)

List: $679.00

GILFER: $529.00(+$6.00)

NTSC TV Board . . .$24.95(no chrg.for inst.&shpg.)

Technical Questions?

Call Paul or Adam for help ***(201) 391-7887***

dressler

ACTIVE RECEIVING ANTENNA SYSTEM FOR THE FREQUENCY RANGE 50 ... 900 MHZ.

FOR INDOOR OR OUTDOOR MOUNTING.

A typical problem encountered with modern wide band VHF-UHF receivers is the choice of suitable aerial. The usual choice is the popular Discone, however, its drawbacks are its size and its lack of frequency above 500mhz.

A modern solution to this problem is the Active Antenna which is the new DRESSLER ARA 900. This offers advantages such as very good impedance matching, very wide frequency coverage and is small compact and unobtrusive.

ACTIVE ANTENNAS versus PASSIVE ANTENNAS

Passive antennas need large spaces if they are a broad band design and although described as wide band antennas often do not meet the requirements for wide band operation.
The DRESSLER ARA 900 is constructed in a compact plastic tube assembly and easily meets its specifications for wide band operation.

Modern VHF-UHF receivers are not as sensitive as we would like them to be. Sensitivity of a VHF-UHF receiver can be described by the noise figure given in db. A good receiver should offer a noise figure of 2-3 db however it is typical that most receivers have a noise figure of 6-7 db. If the antenna is remote from the receiver (which is normal for the best performance i.e the roof) and using 20 metres of coaxial cable for example will result in a loss of about 4 db at 144mhz and approximatly 6 db at 450mhz, taking into account the above figures the normal losses involved would result in noise figures 11 to 14 db. The DRESSLER ARA 900 now demonstrates an important advantage over the typical aerial System (discone) because with the high gain at the aerial, all cable and other losses can be neglected. Putting it simply an DRESSLER ARA 900 with 20 metres of RG 58 cable offers a system noise figure of approximatly 2 db at 200mhz, a passive system with the same cable comes to approximatly 11 db at 200mhz, 9 db! makes a remarkable improvement in overall system performance.

DESIGN OF THE ARA 900

The electronic design of the ARA 900 utilises modern professional techniques. The antenna etched on to the printed circuit board feeds a two stage wide band amplifier followed by a matching and balun network. The design is unique in the fact that it can handle the enormous signal levels offered by VHF-UHF transmitters due to its extremely linear performance which also attributes it with excellent intermodulation performance. In order to achieve this "no compromise" performance both amplifier stages are designed with negative feedback employing rf transformers for the best intermodulation performance without any degregation of the noise figure. The wide band amplifier is built using thick film hybrid technology in order to achieve high reliability an wide band width up to 1 ghz which would not be possible using conventional printed circuit construction.

CONSTRUCTION OF THE ARA 900

Mechanical design of the DRESSLER ARA 900 lends itself from the popular ARA 30 (short wave model) the antenna consists of a large printed circuit board that has the antenna etched on to it, also on the same board is the wide band amplifier and impedance matching network. The advantage of this construction technique is consistancy of performance. The printed circuit is mounted inside an ultra violet resistive tube and this is attached to mast mounting brackets which allow it to be fixed to a mast of 32 - 50 mm in diameter.

ARA 900

$189.00 (+$8)

TECHNICAL PERFORMANCE

Frequency Range	Noise Figure	Gain
50 . . . 300 MHz	1 - 2 db	15 - 16 db
300 . . . 500 MHz	2 - 3 db	15 - 16 db
500 . . . 650 MHZ	3 - 4 db	14 - 15 db
650 . . . 900 MHz	3 - 5 db	11 - 15 db

Intercept-Point 3rd. Order	+ 18 dbm typical
Output Impedance	50 – 75 ohms
rf Sockets Fitted	N Type
Power Supply	12 volts 80ma
Dimensions	Length 450 mm, Dia 90 mm
Weight	2,5 kp

INSTALLATION

The DRESSLER ARA 900 has been engineered to with stand the harshest of enviroments and should provide a long life when fitted in an outdoor location. The DRESSLER ARA 900 is waterproof when fitted vertically on a mast, equally it will work quite well when fitted indoors. When fitted in a vertical position the antenna is omnidirectional and verticaly polarized this of course will reduce interference from high powered vhf broadcast stations and uhf TV stations. Power for the antenna is supplied from the 110/12 volt mains adaptor supplied with the unit, this then connects to the interface unit which feeds the receiver and the mast head unit. The DRESSLER ARA 900 comes with eight metres of cable but cable lengths of up to fifty metres may be used with little loss of performance. The DRESSLER ARA 900 can be supplied with PL 259 or N type connectors.

ACTIVE RECEIVING ANTENNA SYSTEM FOR THE FREQUENCY RANGE 50 ... 900 MHZ.

$189.00 (+$8)

AOR AR-900
$295.00 (+$4)

AOR AR-900: Micro-size handheld scanner with digital keypad entry, 100 memory channels, and 800 MHz coverage. Includes 2 antennas, Ni-Cad battery pack and charger.

Frequency range	27-54, 108-174, 406-512 & 830-950 MHz
Modes	FM narrow, AM
Intermediate frequency	1st IF: 21.4/54 MHz
	2nd IF: 455 kHz
Tuning steps	5, 10, 12.5, 25 & 30 kHz
Power requirements	6 VDC (supplied)
Current drain	65 mA (squelched)
Antenna Connector	BNC
Dimensions	5 3/4"(H) x 2"(W) x 1 1/2"(D)
Weight	12 oz.

AOR AR-2002
$495.00 (+$4)

AOR AR-2002: Excellent performance and low cost. 20 memory channels, optional RS-232 interface, LCD display. Includes 12 VDC supply. Great for home or mobile setups.

Frequency range	25-550 & 800-1300 MHz
Modes	AM, FM (wide & narrow)
Intermediate frequency	1st IF: 750 MHz
	2nd IF: 45.03 MHz
	3rd IF: 5.5 MHz (FM wide); 455 MHz (AM)
	4th IF: 455 kHz (FM)
Tuning steps	5, 10, 12.5, & 25 kHz
Power requirements	12 VDC (supplied)
Current drain	350 mA (squelched)
Antenna Connector	BNC
Dimensions	3 1/8"(H) x 5 3/8"(W) x 7 7/8"(D)
Weight	2 lb.10 oz.

Universal M-7000 $1089.00 (+$10)

The UNIVERSAL M-7000 is the first choice in RTTY/FAX communications. This demodulator allows the serious SWL to decode all common digital communication modes, and a few uncommon ones as well! CW, SITOR modes A & B, Time Division Multiplex, Frequency Division Multiplex, Packet, Facsimile, & more. Fax displays on monitor with Video Fax option. The M-7000 simply connects between your shortwave or VHF/UHF receiver and video monitor via the receivers audio output. Outputs for serial and parallel printers. Remote terminal interface allows for integration with personal computer or dumb terminal. 3 models available:

Standard model	$ 999.00
With Real Time Clock option	$1059.00
With Video Fax option	**$1089.00**
With Video Fax AND real time Clock	$1129.00

Video output requires a **monochrome composite monitor**. Amdek 300A monitors available from Gilfer for **$124.95**. For more information on the M-7000, please call Paul at (201) 391-7887, or send business-size SASE for detailed brochure.

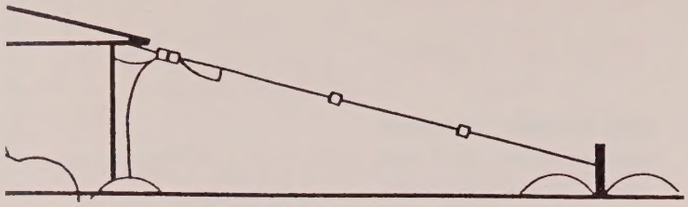
KENWOOD RZ-1 $499.00 (+$5)

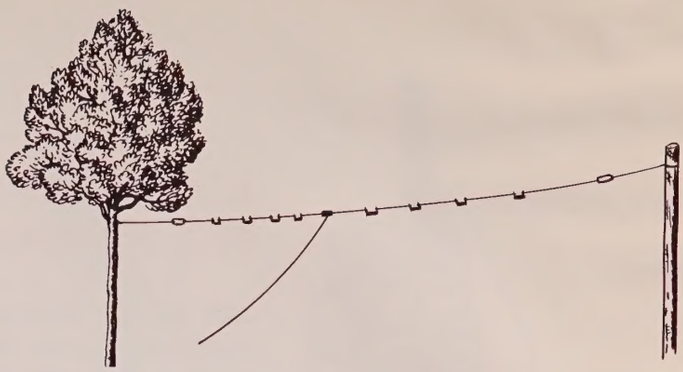
NEW!

KENWOOD RZ-1: ***NEW!*** The ultimate car radio! Unbelievable frequency coverage, 500 kHz-900 MHz, including mediumwave, shortwave, VHF & UHF. Features direct digital tuning; alphanumeric display; 100 memory channels; multiple scanning and delay functions; dual antenna inputs; NTSC video output; and more. Rubber feet included for table-top use. DIN-size chassis for in-dash mounting, brackets for under-dash installation. Requires 12 VDC power.

Frequency Range	500 kHz to 900 MHz
Modes	A3E (AM); F3E (FM Wide and Narrow)
Circuitry	AM, FMn: Triple conversion system
	FM Wide: Double conversion system
Intermediate frequency	1st IF: 45.75 MHz
	2nd IF: 10.70 MHz
	3rd IF: 455.0 kHz (AM/FMn)
Tuning steps	Manual: 5, 12.5, 20 & 25 kHz
	Auto: 10 & 100 kHz
Current drain	Less than 1A (audio output 1W)
Antenna impedance	50 - 300 ohms
Power requirements	13.8 VDC (not supplied)
Dimensions	7.09"(W) x 1.97"(H) x 6.22"(D)
Weight	3.31 lbs

Technical Questions? Call Paul or Adam 10:00am - 5:00 EST (201) 391-7887





MODEL DX-SWL
SHORTWAVE SLOPER ANTENNA

FOR MEDIUM WAVE BUFFS WHO ALSO LISTEN TO THE SWL BANDS

Starts 120 meters (.5 - 1.6 MHz) and goes to
13 meters (21.45 - 21.85 MHz).

REQUIRES ONLY A SINGLE ELEVATED SUPPORT, 25" OR HIGHER. (MAST, TREE, CHIMNEY, WALL OR TOWER). ANGLE OF SLOPE CAN BE ANYTHING CONVENIENT (60° OR LESS)

SINGLE 50 OHM FEED POINT AT APEX OF ANTENNA FOR MAXIMUM DX RECEPTION. UHF-TYPE CONNECTOR PROVIDED ON MOUNTING BRACKET FOR EASY CONNECTION TO YOUR 50 OHM COAX.

MODEL DX-SWL IS FULLY ASSEMBLED FOR EACH INSTALLATION. REQUIRES NO ADJUSTMENT. UTILIZES STAINLESS STEEL HARDWARE FOR LONG LIFE.

UTILIZES BROADBAND LOW-Q RF CHOKE-RESONATORS FOR EFFICIENT MULTI-BAND FREQUENCY SELECTION.

BUILT WITH HEAVY DUTY HIGH POWER
TRANSMIT-GRADE COMPONENTS.

Code: SLOPER **$65.40 (+$3)**

EAVESDROPPER 3
A Great Outdoor (or Attic) Antenna

11 Meters, 13 Meters, 16 Meters, 19 Meters, 25 Meters,
31 Meters, 41 Meters, 49 Meters, 60 Meters.

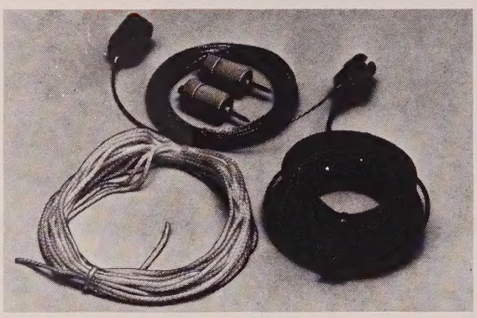
LIGHTNING PROTECTOR CENTER BALUN FROM W2AU.
READY FOR YOUR COAX LINE (purchase separately).
COMPLETELY ASSEMBLED, READY FOR YOUR COAX FEED LINE
(purchase RG58 or RG59).
INCLUDES 50 FEET OF 450-POINT TEST NYLON SUPPORT ROPE.

HEAVY 14-GAUGE ANTENNA WIRE TO SURVIVE THOSE
SEVERE STORMS THAT BRING DOWN LESSER ANTENNAS.
SEALED, WEATHER-RESISTANT TRAPS.
OVERALL LENGTH LESS THAN 43 FEET.

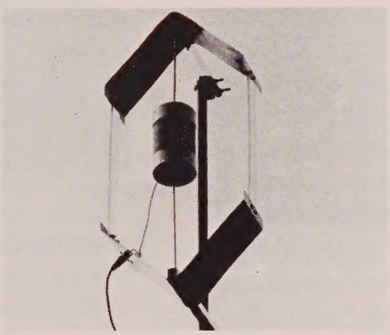
BALANCED INPUT MINIMIZES LOCAL NOISE PICKUP.
AUTOMATIC BANDSWITCHING BY TRAP CIRCUITS,
WHICH ELECTRICALLY SEPARATE THE ANTENNA SEGMENTS—JUST
TUNE YOUR RECEIVER TO THE DESIRED BAND.
MAY BE INSTALLED IN THE ATTIC.

INSTRUCTIONS ENCLOSED. FULL YEAR WARRANTY.

Code: EAVES **$63.40 (+$3)**

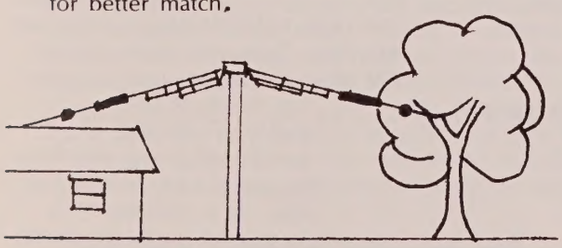


Invert Basic Long Wire Antenna–$19.95 (+$3)
You can buy cheaper, but not better quality. 50' length of 7-22 stranded 14 gauge copper wire with 75' of 7-22 stranded 14 gauge insulated copper lead-in plus 40' of nylon support rope (450# test), 2 strain insulators, 2 nail-knob insulators and crimp on hook lug. Add an antenna tuner for better match.



Isotron "60" 60M Antenna – $75.95 (+$5)
Ideal where space is at a premium. Measures about 4' tall and weighs less than 8 lbs. Omni-directional pattern. Can be matched with 52 ohm coax (optional extra, see below). Needs no radial ground system. Withstands 85 mph wind. Has the signal pickup of a full half-wave dipole with a lot less noise.

Coax Lead-In – 25' for **$9.75** (+$3)
High quality Belden RG58 is 52 ohm, 93% braid stranded copper center conductor coax with PL-259/UG-175 soldered on one end (additional connector available for other end). Other lengths: 50' **$16** (+$4); 75' **$22.25** (+$5); 100' **$28.50** (+$5).



Alpha Delta DX-SWL-S SLOPER:

Short version of the popular DX-SWL model sloper antenna (shown above). Only 40 ft. long, covers 13-90 meters requires coaxial cable.

$59.95 (+$3)

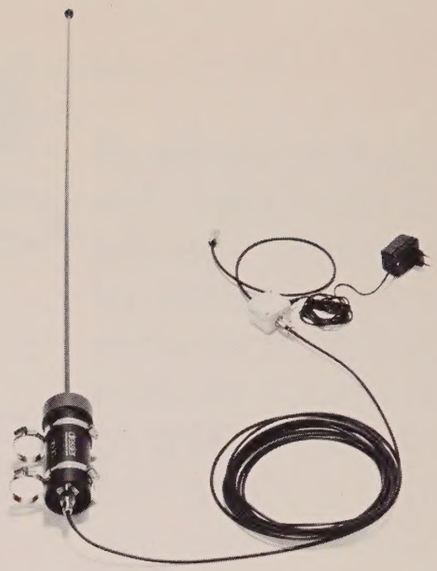
DELTA-4 Lightning Protector
4-position EF coax switch. Attach up to 4 antennas to your receiver (or 4 receivers to one antenna). Same protection as Transi-trap (see elsewhere in catalog). Replaceable gas-filled cartridge. 50-ohm impedance takes PL-259 connectors.
Code: DELTA-4 **$69.95 (+$3)**

Technical Questions?
Call Paul or Adam
For Help
(201) 391-7887

dressler

ACTIVE RECEIVING ANTENNA SYSTEM FOR THE FREQUENCY RANGE 200 kHz ..... 30 MHz

for indoor and outdoor mounting



Dressler ara 30 SW Active Antenna— $159.95 (+$8)

The increasingly popular hobby of shortwave listening and very often the limited space required for an efficient receiving antenna system small in size but offering the technical performance of long wires equally or half in length to the wavelength you are listening to – usually between 10–160 meters in length.
These conditions are solved by the use of active antennas – an antenna small in size with an electronic amplifier built in. The amplifier with impedance transformation has to meet the goal to match the very high impedance of the short rod to the nominal impedance of 50..75 ohms to supply the receiver with the necessary signal levels.

Active antenna contra passive antenna

The main reason to use an active aerial is to avoid large space requirements, which is the most important feature of active antennas. Only in rare cases one will have enough space to erect a full size long wire antenna system.

Furthermore the dressler ara 30 offers you the following advantages:

- The constant output impedance of 50...75 ohms on all frequencies allows direct connection to the receiver without use of a matching network.
- Because no matching equipment is necessary the active antenna can be installed at distance from the receiver at an optimum location.
- Passive antenna systems are only matched at an optimum point at one operating frequency which results in less efficiency at all other frequencies. The dressler ara 30 offers a constant receiving performance at the frequency range of 200 kHz (VLF) up to 30 MHz (SW).
- Modern communications receivers perform with a very high sensitivity which makes big antenna systems negligible. The dressler ara 30 system therefore offers a limited gain in order not to create overload of the receiver.

Technical Performance ara 30:

frequency range	:	200 kHz ... 30 MHz with optimal sensitivity. Up to 100 MHz with limited performance.
output impedance	:	50–75 ohms
gain	:	10 dB gain by the push-pull-amplifier stage
rf socket fitted as standard	:	SO 239 (PL)- type at top amplifier SO 239 (PL) at INTERFACE
power supply	:	11–15 volts DC with 100–140 mA DC current
mechanical length	:	145 cm (glassfiber rod including aluminium tube)

Design of the ara 30

The electronic design has been done with respect to professional active antenna techniques: The antenna rod supplies to a low noise field effect transistor which acts as an impedance transformer together with a high linear CATV transistor. The necessary additional gain is achieved by a push-pull-amplifier stage working with noiseless negative feedback. The result can be found with very good linearity which reduces intermodulation effects to a minimum together with low noise figures. This solution is quite costly but offers much better results than simple common techniques.

Construction of the ara 30

The ara 30 has been designed very carefully in respect to mechanical ruggedness. The antenna therefore consists of a 2,5 mm thick aluminium tube in which the electronic circuitry is fixed. A special hard PVC part connects the aluminium tube and the glassfiber rod. The mast mounting brackets allow it to be fixed to a mast of 28-48 mm in diameter.

Installation of the ara 30

The active aerial system ara 30 has been engineered mechanically to withstand the hardest environment conditions together with a long life. Because the dressler ara 30 is waterproof when fixed in a vertical position installation to mast outdoors as well as locations indoors can all be achieved. If the ara 30 is installed in vertical position one can achieve omnidirectional characteristics and low radiation angles for DX.
For the power supply a wall plug adapter 110/12 volts is included with the antenna and connects to the INTERFACE in order to feed the DC supply voltage to the mast head amplifier via the coaxial cable. At the other hand of the INTERFACE connects to the receiver antenna input. The coaxial cable supplied with the ara 30 is 8 meters long, but cable lengths up to 50 meters can be ordered.

ORDER

1-800-GILFER-1

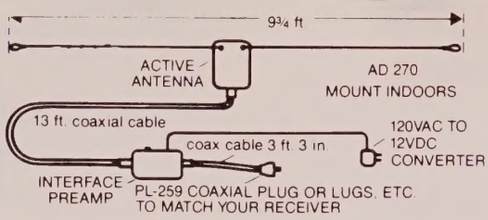
ara 30

active antenna

$159.95 (+$8)

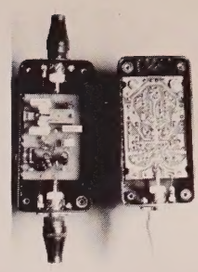
INDOOR/OUTDOOR

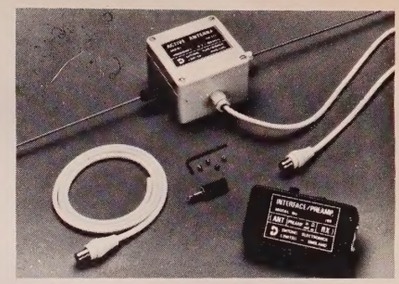
*Good things do come in small packages. For example, see the amazing quantity of miniturized components in the amplifier section of the **AD-270/370** to the right. Datong has long been known for their quality crafted accessories. Apartment dwellers take heart — your problems of outer space can be solved.*

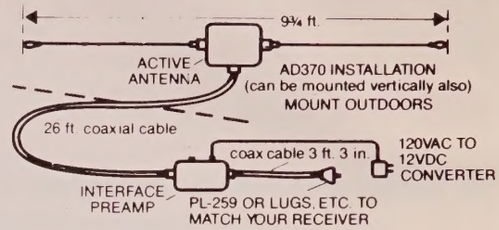


DATONG AD-270
Indoor Active Antenna **$109.95 (+$4)**

A 3-meter dipole with special low-noise amplifier suspended between two 1½ meter wire elements. A 13' downlead permits flexible arrangements (near a picture window, across the ceiling, in an attic). Flat response from 200 kHz to over 30 MHz, useful from 100 kHz to 70 MHz. 6dB gain at dipole amp., interface gain switchable to 12 dB. Cable (specify terminals; spade lugs, RCA phono, or PL-259 coax connector). Optional power converter







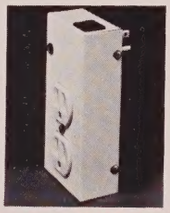
DATONG AD-370
Outdoor Active Antenna **$129.95 (+$4.50)**

The AD-270 adapted to outdoor use by replacing wire elements with stainless steel tapered whips. Mounts to any flat surface (horizontal, vertical, or diagonal). 26' coax cable. Optional power converter

Transi-Trap Lightning Arrestor
$29.95 (+$2)

Isn't your receiver worth the few dollars more to protect it? This modern device uses a replaceable gas cartridge to prevent damage to solid-state components — changes a 10,000 ohm impedance to a few milliohms in less than 100 nanoseconds to ground impulses before the damage is done.

Replacement cartridge — $12.95 (+$2)
Receiver cable — $6 (+$2)

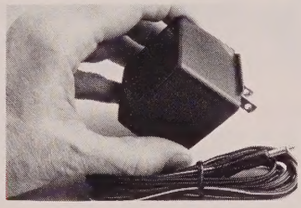


Surge Protector – $29.95 (+$3)
Plug-in surge protector and circuit breaker protects your receiver from power line voltage spikes, the most common cause of in-use failure. Provides transverse and command mode protection with a hot-to-neutral, neutral-to-ground, and hot-to-ground 6000 volt, 2000 ampere surge discharge self-restoring high speed circuit. You can't buy better protection.

McKay Dymek Active Antenna – $190 (+$5)
Just 4'-8" tall, weatherproof, and hard to beat performance. Indoor interface has controls for matching receiver impedances. Also has connection for auxiliary antenna. May be powered by 117 or 230 VAC or 12 VDC (power cord included). Connection to receiver is PL-259 coax connector. Includes 50' of RG58 coax (may be extended).

EAVESDROPPER SLOPER
By Antenna Supermarket. Tuned for all the shortwave broadcast bands, as well as mediumwave. Ruggedly constructed with #14 standed hard-drawn bare copper wire. All connections soldered. Aluminum mounting bracket. Includes 50 ft. of 450-lb test nylon rope.

$59.95 (+$3)



Power Adaptor
$19.95*

Our power adaptors are especially made for us. Chosen from all that we tested for the most consistent performance, quality materials and least ripple. Made in USA.

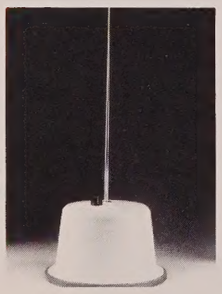
*(+$2.00 if bought separately, no shipping charge if purchased with antenna).

Equidistant Azimuthal Map **(Great Circle Map)** centered on USA. Shows radio zones, time zones & prefixes. 41"x31"
$8.00 (+$2.50)

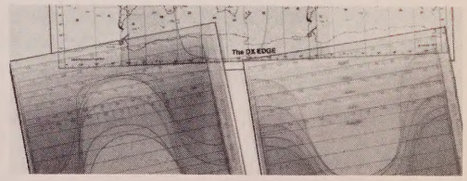
SONY AN-1 ACTIVE ANTENNA
For indoor or outdoor use. Runs on 6 "AA" batteries or optional 9 VDC power supply (AC-12 or equivalent). Perfect for small portables. Covers LW, MW, and SW bands. 59" telescoping antenna rod, 39 ft. coax cable.

$79.95

DATACOM SOFTWARE:
Control your JRC, ICOM, Kenwood or Yaesu radio with an IBM-PC or compatible computer. Menu driven for easy use. Expands your radio's memory capability, and increases scanning flexibility. Requires 256K RAM, 1 serial port and 1 floppy disk drive. **$99.95.**
(Also available: RS-232 interface, allows up to 4 radios. $99.95).



Funtenna Passive Antenna
Here's a solution to the problem of gain when you're too close to a transmitter or surrounding noise to use an active antenna. And, no one will object to the low-key look of this walnut-based compact unit atop your desk. A 12-position switch peaks signals from 6.8 to 50MHZ. Omnidirectional. No batteries needed. Money back guarantee.
$79.95 (+$4)



DX Edge
Daylight/darkness around the world at any time of day. Gray line and long path times seen at a glance. Plastic slide rule format is easy to use.

$22.95 (+$2)

SHOWROOM 52 Park Ave., Park Ridge, NJ 07656 **GILFER BOOKS (201) 391-7887**

CHECK OFF	ITEM	PRICE

CHECK OFF	ITEM	PRICE

COST OF GOODS _____

Mastercard/Visa/Discovery/Am Ex ($20 Minimum)
Credit card # _____
and
Expiration date: _____

Signature: _____

NJ Residents add 6% tax..... _____

Shipping & handling - _____
Shipping & handling of books $2 for first book - $3 for 2 or more
Accessories: There is no charge for installation when purchased with receiver.

CREDIT CARD ORDER
CHECK/MONEY ORDER ENCLOSED _____

PRICES SUBJECT TO CHANGE WITHOUT NOTICE.

FOLD BACK 1 — FOLD BACK

Ordered by:

_____

_____

_____

PLACE STAMP HERE

GILFER SHORTWAVE
GILFER ASSOCIATES, INC.
P.O. BOX 239
PARK RIDGE, N.J. 07656 U.S.A.

FOLD BACK 2 — FOLD BACK

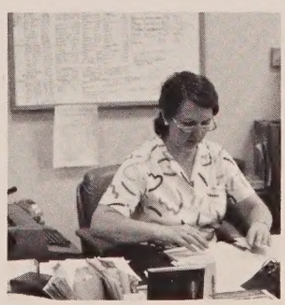
Technical Questions? Call Paul or Adam For Help (201) 391-7887

ADAM ARONSON — writing up an order for a customer. Adam's DX'ing interest lies in utilities —his copy of the *Confidential Frequency List* is pretty beat-up, as you might guess.

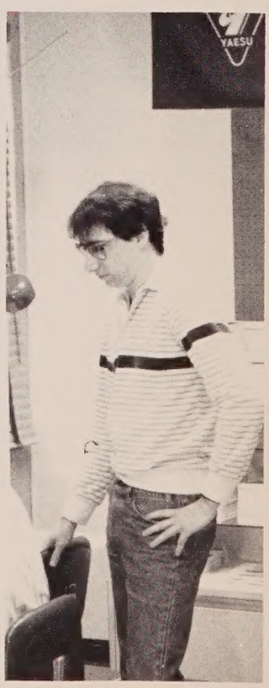
CHERYL MIEDEMA — at her station shipping out all your goodies, fast and well-protected. She sends a smile along with every package.

JEANNE FERRELL searching out the newest products and books on shortwave, scanning and hamming to make your experience with GILFER one of total satisfaction.

KATHLEEN ROMAINE, Office Manager. Kathy routes your order in and out in her ever-efficient manner.



PAUL LANNUIER, N2HIE, Store Manager and Tech Assistant. Paul knows the ins and outs of shortwave (10-year veteran). He belongs to several SWL clubs and holds an Advanced class ham license. You'll be safe in his hands whatever your interests.



AUDIO FILTER

"How to separate the signal you want from the signals you don't want?" That's one of the most difficult problems for HF bands operators today, and one which Model FL3 is uniquely able to solve.

In one stylish case Model FL3 offers the complete solution to receiver audio processing. We believe that such a powerful combination of filtering capabilities has never before been offered in one package.

FEATURES

- Fully automatic notch filter for "hands-off" removal of tune-up whistles and other steady tone interference.
- Independent low-pass and high-pass filters with very steep cut-off for removing "monkey chatter" and other off-tune interference from SSB signals. Both filters tune continuously from 200 to 3500 Hz.
- Second notch filter tunes manually from 200 to 3500 Hz.
- For speech reception all four filters work quite independently giving remarkable flexibility and performance.
- A special tuning mode for CW and RTTY combines the low-pass, high-pass and pk-notch filters into a single 12 pole filter with superb skirt selectivity and with non-interacting controls for centre frequency and bandwidth.
- All functions and controls are calibrated and designed for convenient and natural operation.
- Works with any receiver, no internal connection required. Simply connect in series with an external loudspeaker or phones.
- Protected 2W output stage built-in.
- 29 IC's including the latest switched-capacitor filter technology.

Auto-Notch filter scans continuously

Users of our pioneering Model FL1 will confirm the practical advantages of an automatic notch filter for SSB reception. With absolutely no help from the operator the automatic notch tirelessly scans the receiver's audio output until a continuous audio tone is received. When it is the notch filter locks on and removes it. If the tone changes in frequency the auto-notch follows.

Shoots down tune-up whistles and heterodynes

Imagine the benefits. A tune-up whistle no longer causes any problems; after a second or two it simply drops out of ear shot. Those tiresome whistles that frequently descend on a QSO no longer cause any problem. Only the "LOCK" lamp on the FL3's panel reminds you of what you are thankfully missing.

Plus low-pass, high-pass and manual notch

While all this is happening you still have three other independent filters at your disposal. Imagine, for example that another SSB station starts up 2 kHz high. Instead of trying to copy through all that high-pitched monkey chatter simply turn down the low-pass filter (the right hand knob) and wipe it out.

Then perhaps a teleprinter starts up 300 Hz above your carrier frequency; a touch on the high-pass filter knob (the middle one) cures that.

Finally maybe a second whistle appears. Since the auto-notch is busy, just bring in the manual notch as well and tune it out (left hand knob).

Steep skirts are vital

When an off-tune SSB station interferes with a wanted SSB station very sharp selectivity is vital if the interference is to be removed without also removing too much of the wanted signal.

It is equally vital that the overall receiver bandwidth can be smoothly adjusted to match the actual prevailing conditions.

Using modern active filter technology, Model FL3 gives upper and lower passband edges which can be placed anywhere between 200 and 3500 Hz, and which are steeper even than those of high quality crystal filters.

Not only does Model FL3 beat techniques such as "IF shift" and "Pass-band tuning" on sheer performance, it has an important extra advantage: it can easily be added to any existing receiver since all the signal processing takes place in the audio output line between the receiver and its loudspeaker. And of course, it still has its unique auto-notch and separate manual notch in reserve.

How it works

The auto-notch function in Model FL3 uses a voltage tuned notch filter in a phase lock loop system. The filter sweeps back and forth through its full range until lock is detected after which it tracks the signal. Special techniques combine a short lock time with the ability to stay locked to very weak signals.

Model FL3's low and high pass filters both use 5-pole elliptic function filters to give the steepest practicable rate of cut-off. A separate 2-pole notch or peak filter is used as the manual notch or peak filter.

Each of these three filters is continuously tuneable from 200 to 3500 Hz. Tuning is by linear voltage control and precision tracking between the three filters allows them to be used ganged together or independently as determined by the various operating modes.

The advanced design techniques used in Model FL3 were developed by Datong especially for use in this application. All filter sections are based on the "state-variable" technique for optimum long term stability.

DATONG ELECTRONICS

MODEL FL3

DATONG FL-3 Automatic Audio Filter – $229.95 (+$4)

Typical performance data

Auto notch filter	
Filter type:	2-pole, constant Q, switched capacitor
Tuning range:	200 - 4000 Hz
Lock time:	Depends on signal strength; typically less than one second
Notch depth:	40 dbs
Filter Q:	10
Low and high pass filters	
Filter type:	Both filters are five-pole elliptic function
Frequency range:	200 to 3500 Hz, linear tuning
Minimum stop band rejection:	40 dbs.
Rate of cut-off:	40 dbs in 500 Hz at 2 kHz, 40 dbs in 120 Hz at 500 Hz
Manual notch/peak filter	
Filter type:	2-pole state variable, constant bandwidth
Frequency range:	200 to 3500 Hz, linear tuning
Notch width in "SSB+ NOTCH" mode:	200 Hz at -6 dbs
Notch depth:	30 dbs
General	
Bandwidth range "CW (2)" & "RTTY" modes:	100 to 1750 Hz at -6 dbs (10 poles total)
"CW" mode:	70 to 700 Hz at -6 dbs (12 poles total)
Input impedance:	5000 ohms
Overall voltage gain:	unity
Power output:	2 watts into 8 ohms with 15 v supply 1.5 watts into 4 ohms with 10 v supply
Output protection:	The output stage (LM380) is short-circuit proof and over-dissipation proof
Supply current:	85 mA zero volume 400 mA max. output
Supply voltage:	10 to 15 volts DC. Protected against reverse polarity
Size:	184mm wide x 153mm deep x 44mm high (7.2 x 6.0 x 1.7 inches) Feet add 10mm (0.4 inches) to height
Weight:	860 gms (31 ounces)

Accessories supplied: Input and output leads (phono plug to bare end), jack for DC power supply.

Optional extra: Mains power unit, AC mains to nominal 12 volts DC. MPU or MPU/1 for 240V, MPU/1A for 220V. Made in USA **$19.95**